

Claims

1. Method for transmitting data (D) in a radio communication system (MHSFN), wherein

- 5 - the data (D) is transmitted from a transmitting station (SS) to a data-receiving station (RS) receiving the data (D) over at least two relay stations (HS1,HS2,HS) in each case receiving and forwarding the data, and
- the data (D) will be retransmitted in the event of unsatisfactory transmission due to a request (ACK) [sic] from the receiver side,
- 10 characterized in that
- the request is generated only by the receiving station (RS) and sent to the transmitting station (SS)
- 15 and
- the transmitting station (SS) retransmits the data.

2. Method for transmitting data (D) in a radio communication system (MHSFN), wherein

- 20 - the data (D) is transmitted from a transmitting station (SS) to a data-receiving station (RS) receiving the data (D) over at least two relay stations (HS1,HS2,HS) in each case receiving and forwarding the data, and
- the data (D) will be retransmitted in the event of unsatisfactory transmission due to the absence of an acknowledgement from the receiver side,
- 25 characterized in that
- a retransmission of the data (D) to the receiving station (RS) will be controlled only by the transmitting station (SS)
- 30 in the event of the absence of the acknowledgement from the receiver side.

3. Method according to claim 1 or 2, wherein

- at least one of the relay stations (HS2) checks the data (D) received from the transmitting station (SS) with regard to reception quality and if the reception quality is not satisfactory does not forward said data (D) to the receiving station
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(RS), and if the reception quality is satisfactory does forward said data (D) to the receiving station (RS).

4. Method according to a preceding claim, wherein

5 the data (D) is only transmitted over one of the at least two relay stations (HS1,HS3) which has received the data (D) from the transmitting station (SS) with a satisfactory reception quality.

10 5. Method according to claim 3 or 4, wherein

error correction methods or error detection methods are applied in at least one of the relay stations (HS2,HS3) prior to the forwarding of received data (D) for the purpose of detecting the data which has been received sufficiently well or unsatisfactorily.

6. Method according to a preceding claim, wherein

in at least one of the relay stations (HS2) the forwarding of received data (D) is carried out or not carried out depending on a specific own reception quality and depending on information about reception quality received from at least another of the relay stations (HS3).

7. Method according to a preceding claim, wherein

25 the transmitting station (SS), the receiving station (RS) and at least some of the relay stations (HS1-HS3) belong to a radio communication system (MHSFN) communicating on a single frequency.

30 8. Method according to a preceding claim, wherein

the data (D) is forwarded over different parallel paths embodied via different relay stations (HS1;HS2;HS3), with said data (D) being processed, in particular preemphasized and/or deemphasized, decoded and/or encoded, in the relay stations.

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9. Method according to a preceding claim, wherein the data (D) transmitted in parallel over different paths is received overlaid on the receiver side and processed jointly.

- 5 10. Communication station (RS,SS,HS1,HS2,HS3) of a radio communication station which is embodied as a relay station (HS1-HS3) and has
- a receiving device (R) for receiving data (D) requiring to be forwarded from a transmitting station (SS),
 - 10 - an analyzing device (A) for analyzing said data (D) with regard to its reception quality, and
 - a transmitting device (S) for forwarding the data (D) to a receiving station (RS) depending on the result in the analyzing device (A).